

# **Evaluation of Dominant Breast Masses**

Elizabeth A. Mittendorf, MD

Department of General  
Surgery

Malcolm Grow Medical  
Center

A 12 yo female presents complaining of a small mass directly under her right nipple. You should:

- a. Reassure her that it is benign
- b. Order an US
- c. Order a mammogram
- d. Perform an FNA
- e. Refer to surgery for excisional biopsy

A 25 yo female presents complaining of a mass present in her left upper outer breast for the past 6 months. The best initial step is to:

- a. Reassure her that it is benign
- b. Order/Perform an US
- c. Order a mammogram
- d. Perform an FNA
- e. Refer to surgery for excisional biopsy

The most likely diagnosis is:

- a. Breast cancer
- b. Cyst
- c. Fibroadenoma
- d. Normal breast tissue

A 57 yo female presents with a mass present in her left upper outer breast for 6 weeks. The most likely diagnosis is:

- a. Breast cancer
- b. Cyst
- c. Fibroadenoma
- d. Normal breast tissue

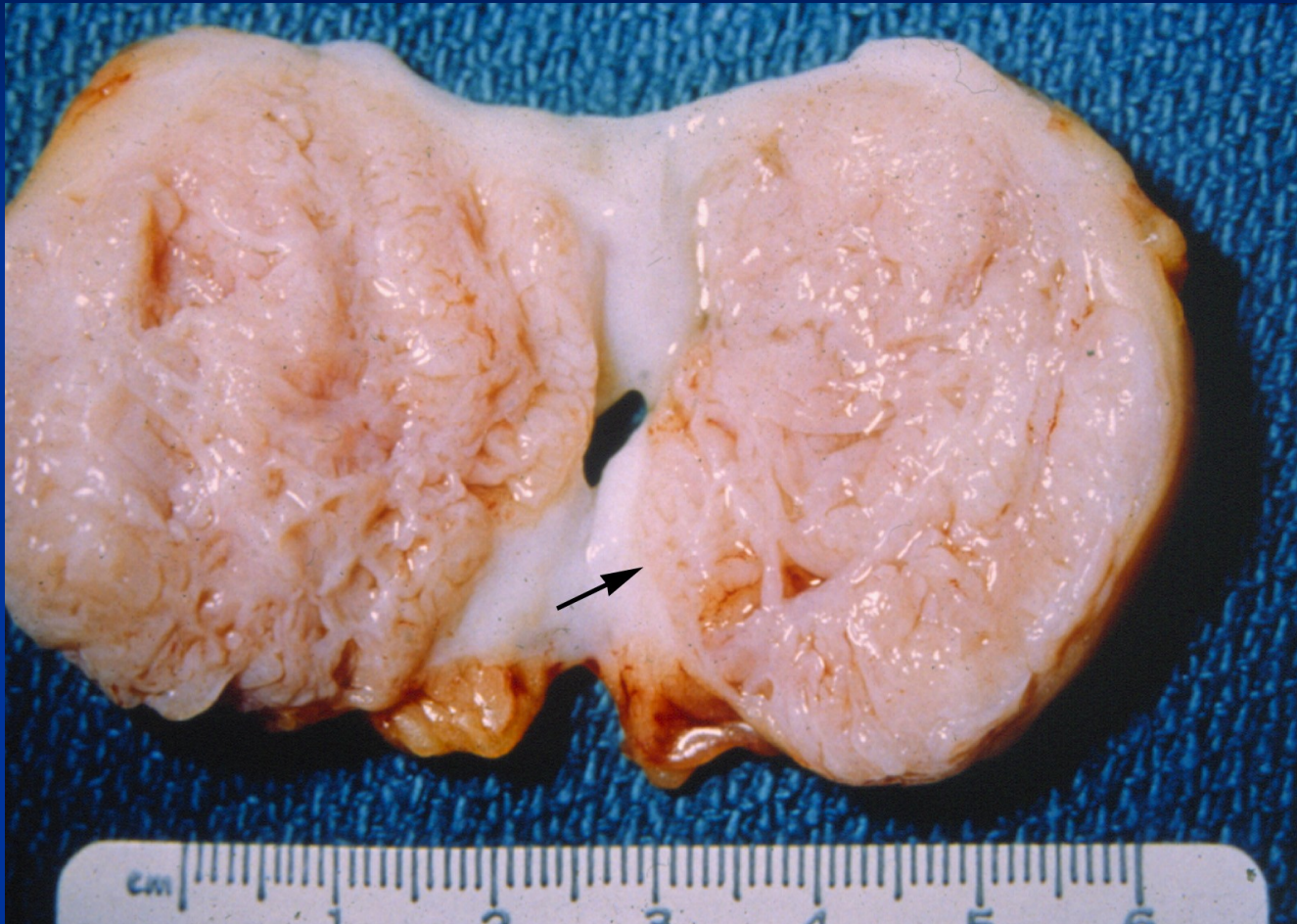
# Evaluation of Breast Masses

- Differential diagnosis
- History and physical exam
- Further diagnostic studies

# Differential Diagnosis

- Normal, dense breast tissue
- Fibroadenoma
- Macrocyst
- Fat necrosis, hematoma
- Carcinoma

# Fibroadenoma

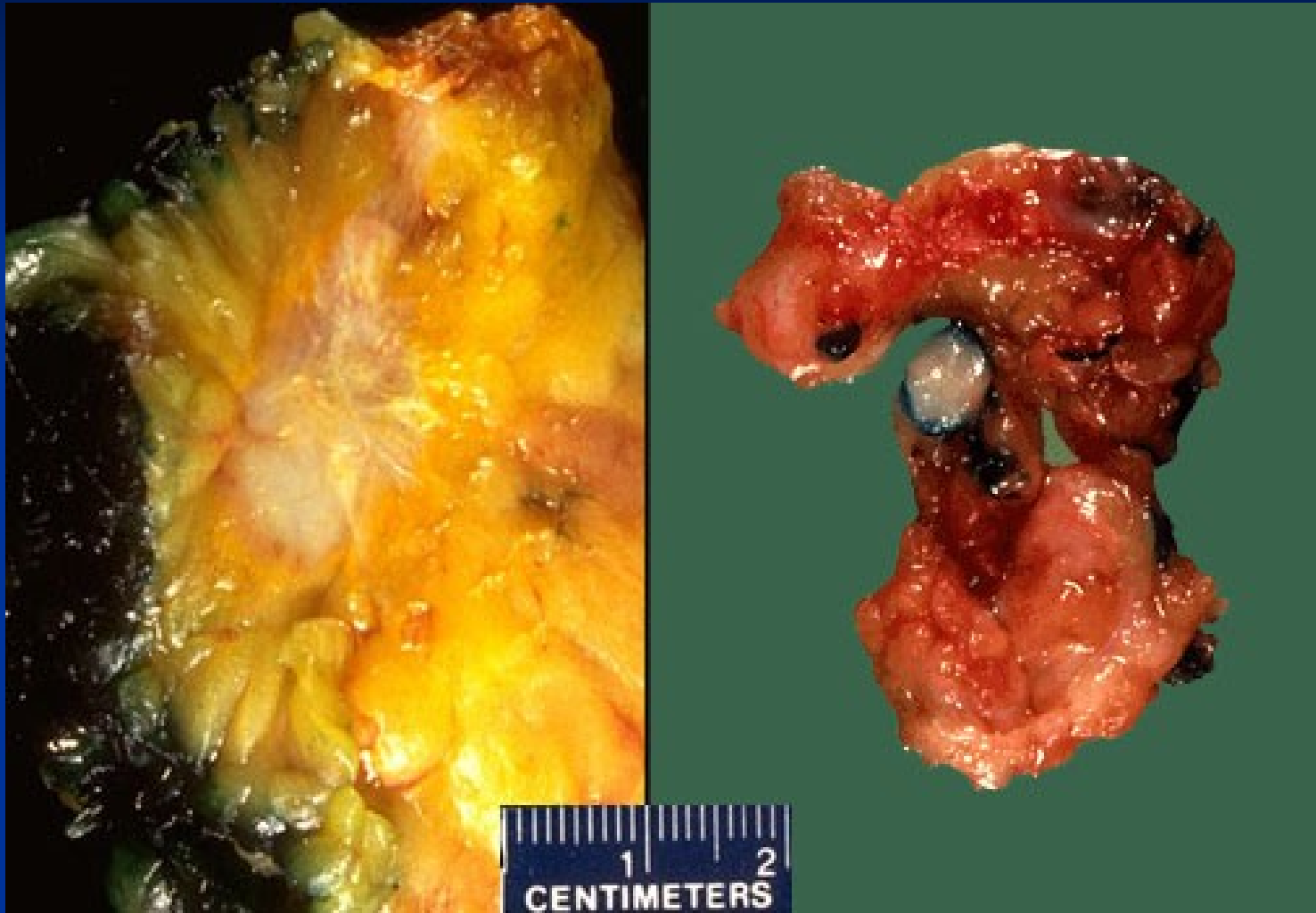




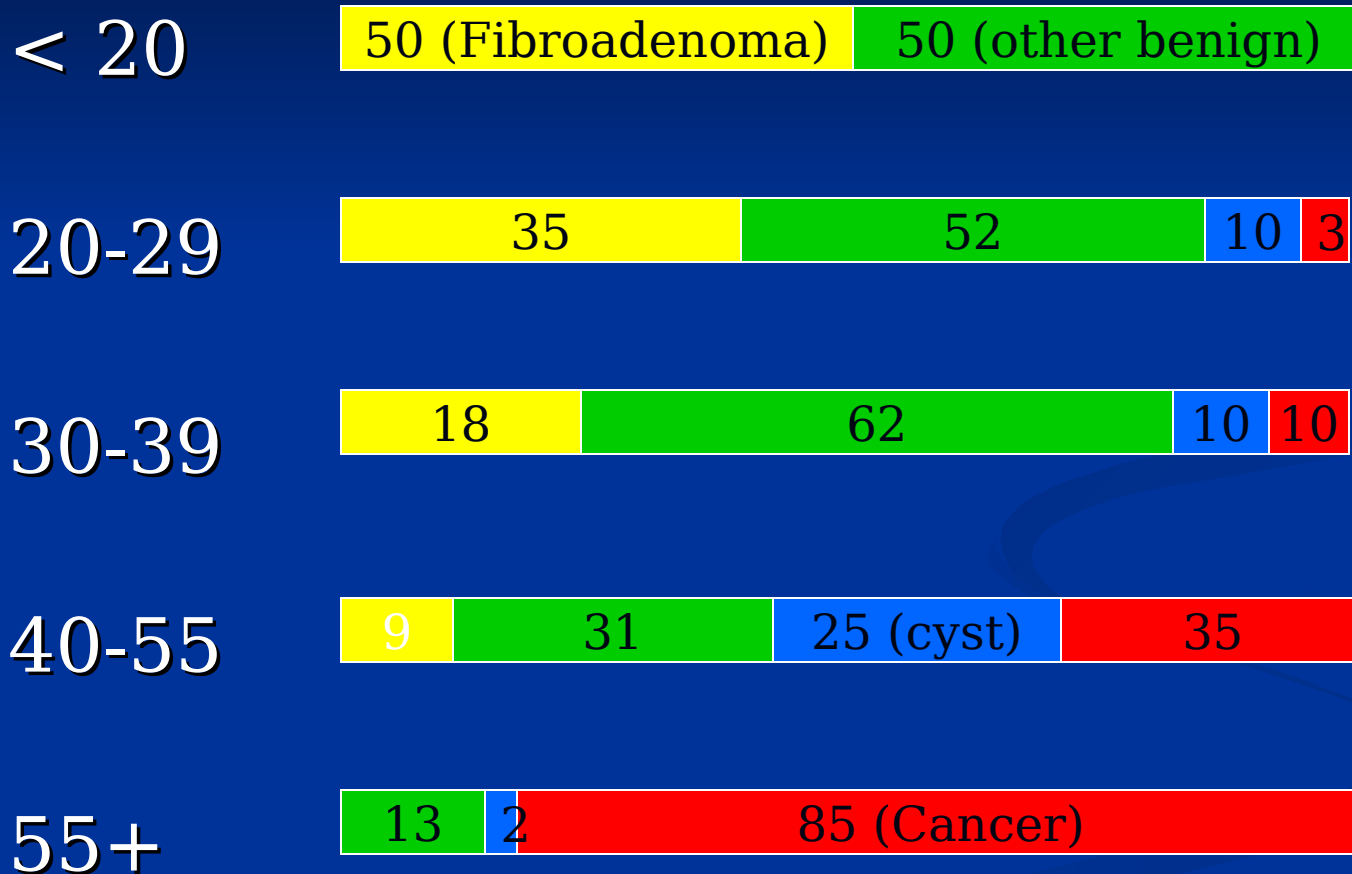
# Dominant Cyst



# Carcinoma



# Etiology of Discrete Breast Masses



Percent

# History

- Personal history of breast CA
- Personal history of breast biopsy
  - LCIS
  - ADH
- Family history
  - First order relatives
  - Relationship to menopause

# History

- Estrogen exposure
  - Menarche
  - Menopause
  - GxPx status, age at first delivery
  - HRT
- Mammogram history
- ? Monthly SBE

# History

- Mass
  - When first noticed
  - Trauma
  - Change in size
  - Tenderness

# Physical Exam

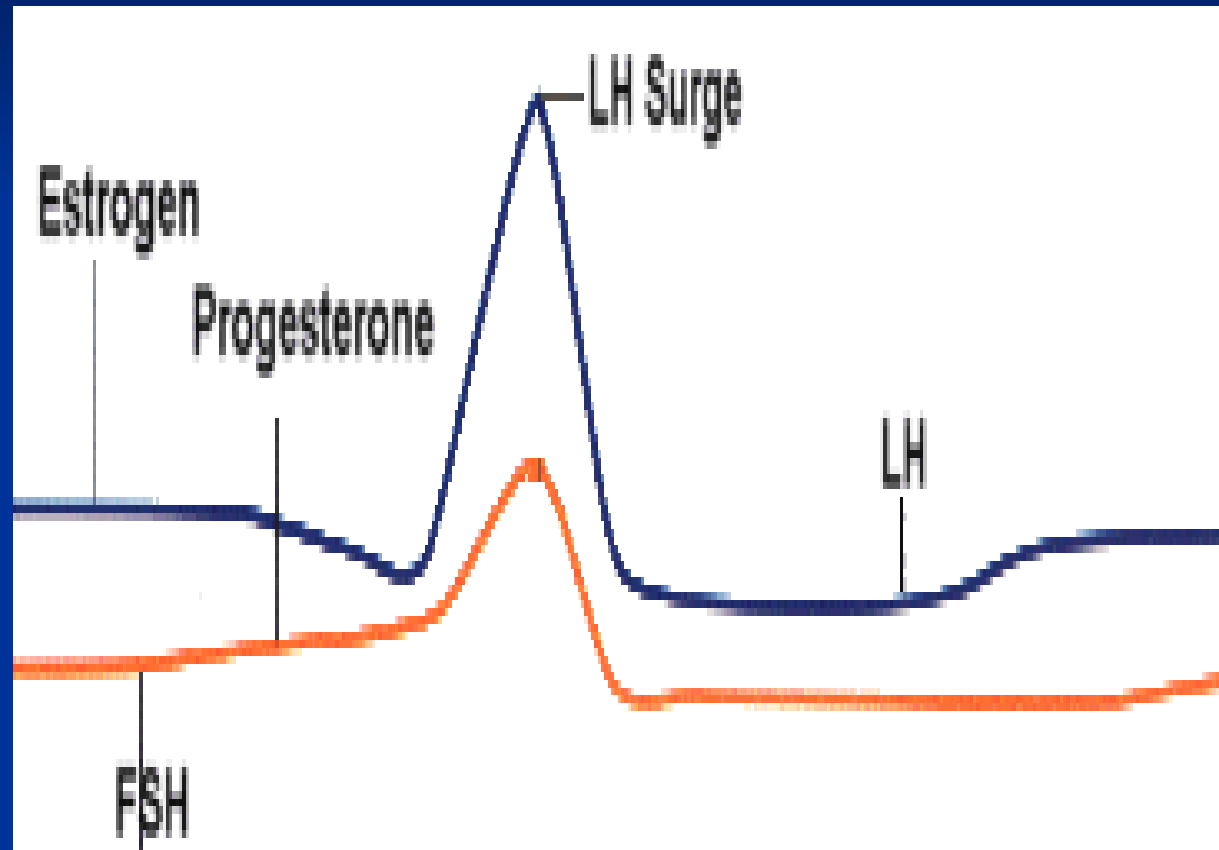
- Skin or nipple retraction
- Mass
  - Location
  - Size
  - Shape
  - Consistency
- LNs

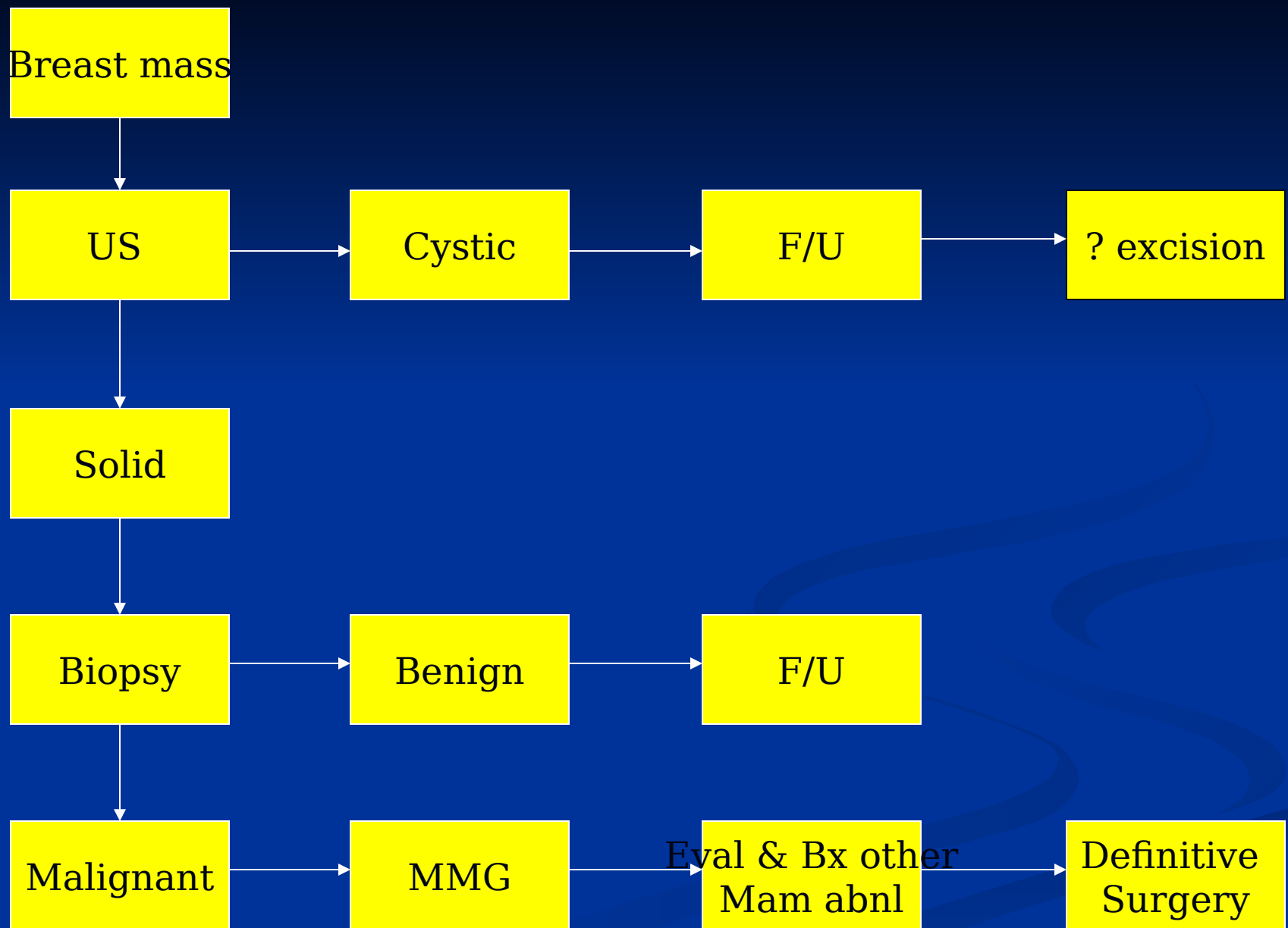
# Physical Exam

- Normal, dense breast tissue
- Location
  - Upper, outer quadrant
  - Inframammary fold
- Symmetry

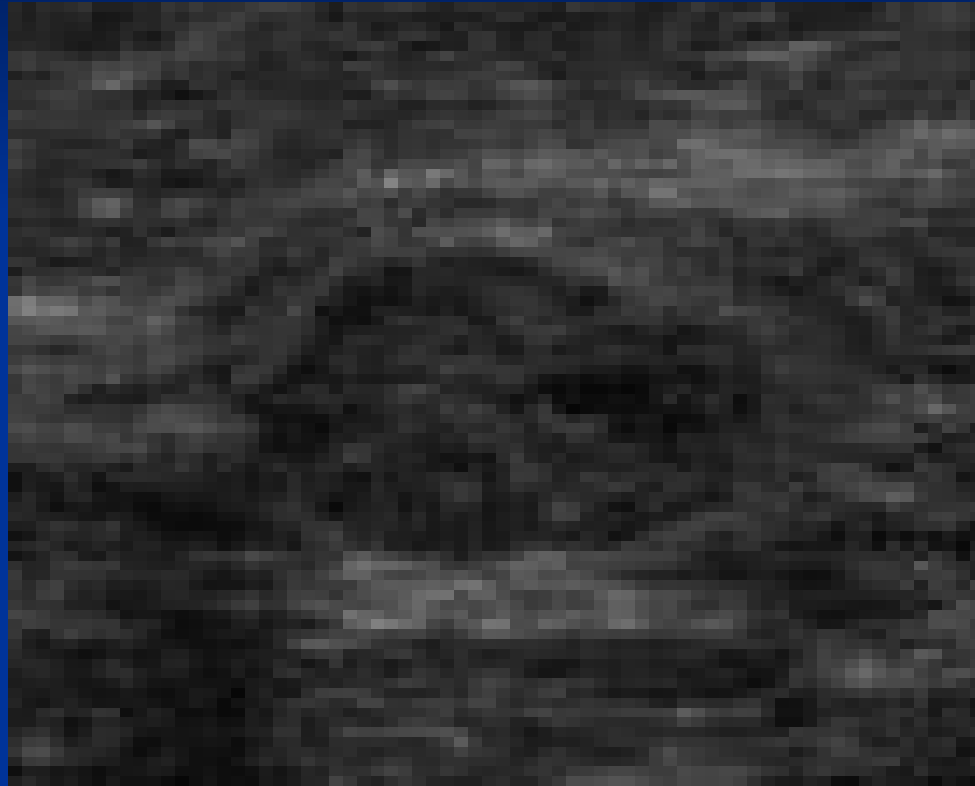


# Timing of CBE





# US - Fibroadenoma



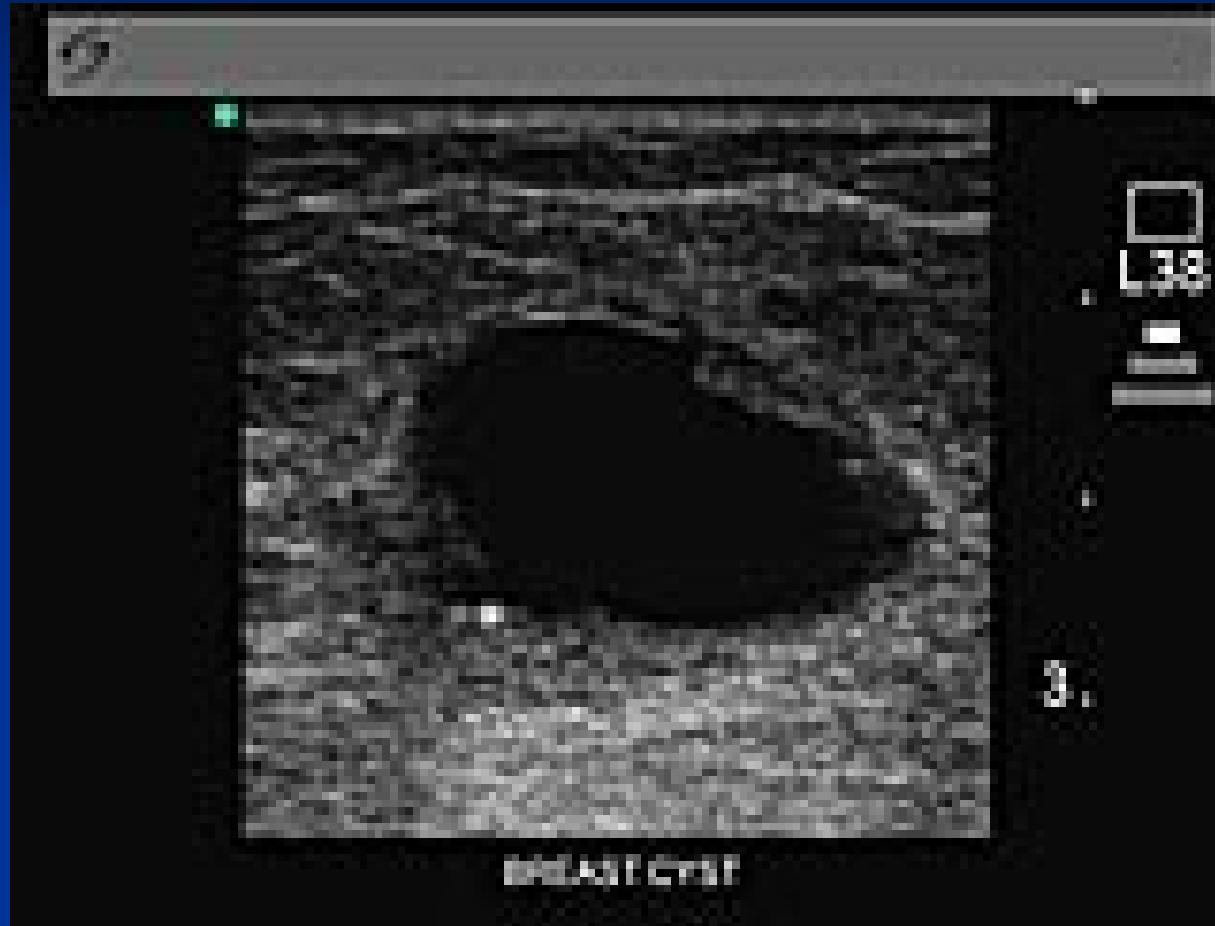
# Cyst

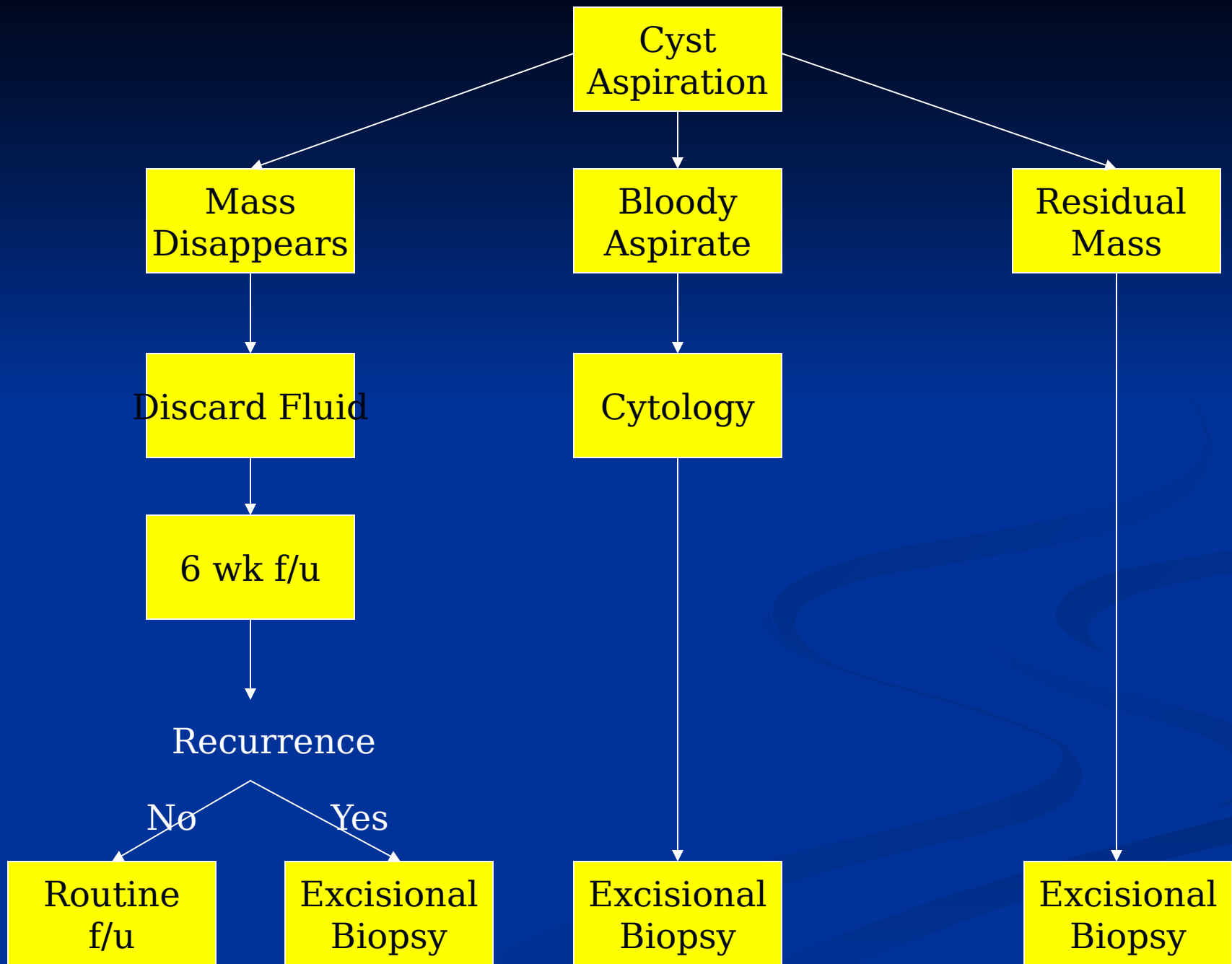


# Cyst Aspiration



# Cyst with Calcification



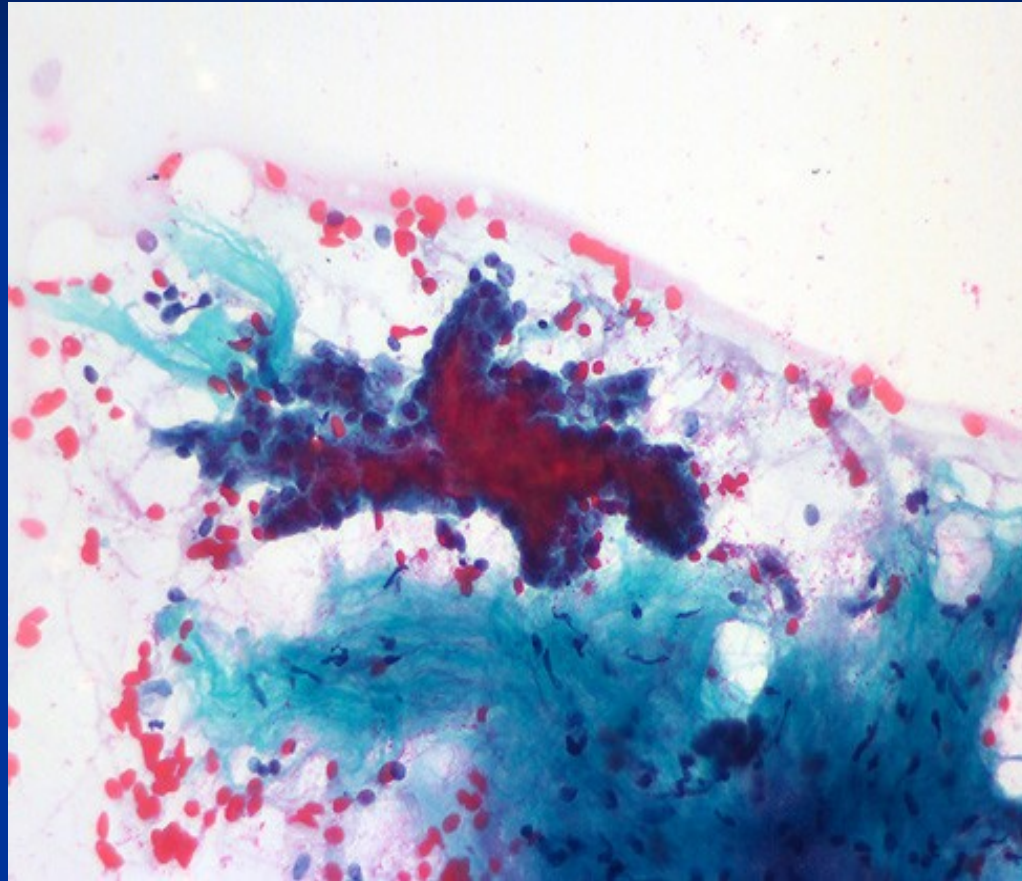


# Solid Breast Masses

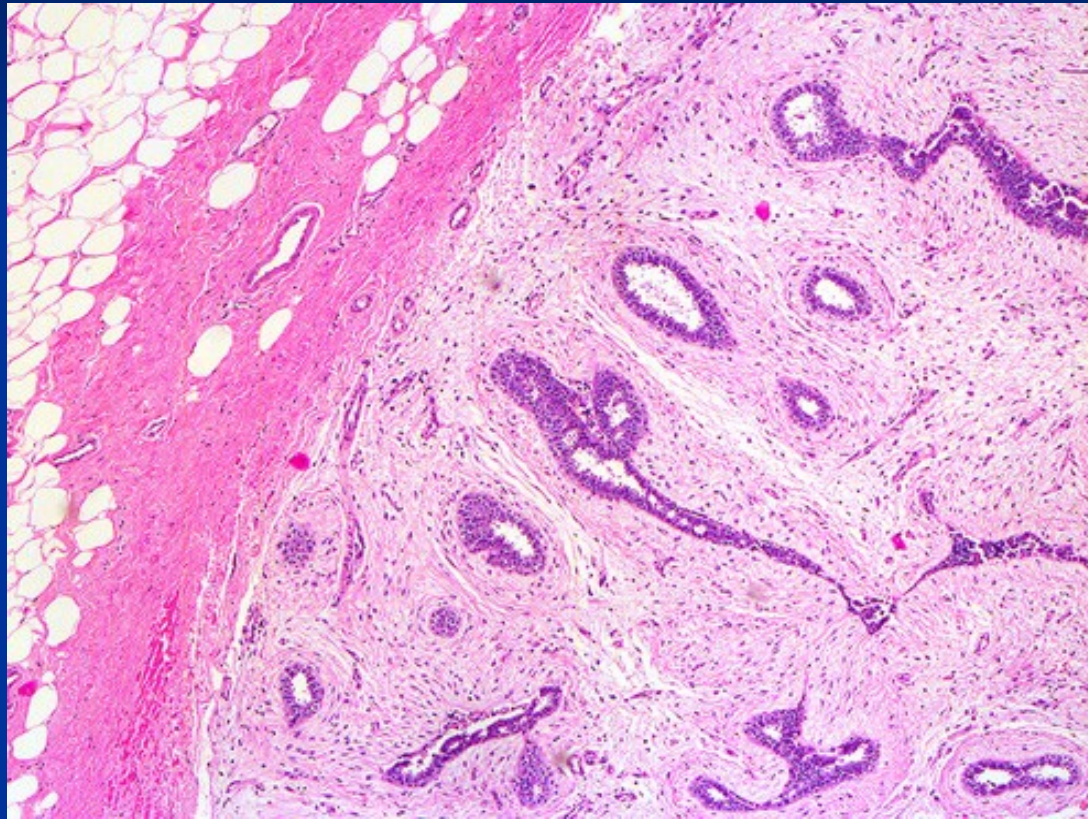
- Fine needle aspiration biopsy
  - 22-gauge needle, 10 cc syringe
  - cytology
- Core biopsy
  - Possible to delineate architecture
- Excisional biopsy
  - Gold standard

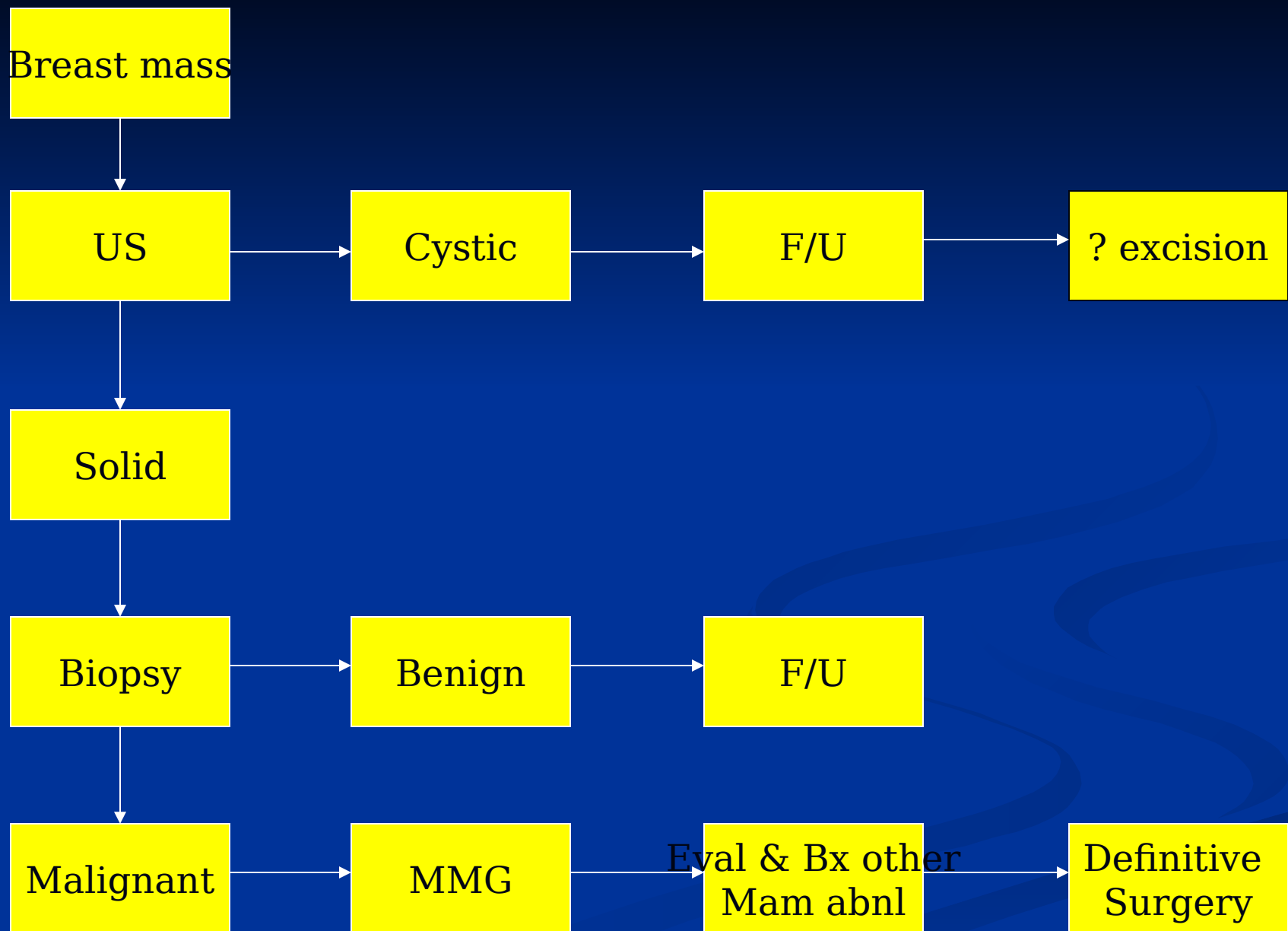


# FNA



# Excisional Biopsy





A 12 yo female presents complaining of a small mass directly under her right nipple. You should:

- a. Reassure her that it is benign
- b. Order an US
- c. Order a mammogram
- d. Perform an FNA
- e. Refer to surgery for excisional biopsy

A 12 yo female presents complaining of a small mass directly under her right nipple. You should:

- a. Reassure her that it is benign
- b. Order an US
- c. Order a mammogram
- d. Perform an FNA
- e. Refer to surgery for excisional biopsy

# Breast Bud

- Puberty:
  - FSH stimulates ovaries to produce estrogen
  - Estrogen promotes growth and development of breasts
  - Tanner phase
    - I nipple/breast project as single mound
    - II increased amount of palpable glandular tissue  
increased diameter of pigmentation of areola  
breast and nipple remain in single plane

A 25 yo female presents complaining of a mass present in her left upper outer breast for the past 6 months. The best initial step is:

- a. Reassure her that it is benign
- b. Order/Perform an US
- c. Order a mammogram
- d. Perform an FNA
- e. Refer to surgery for excisional biopsy



A 25 yo female presents complaining of a small mass present in her left upper outer breast for the past 6 months. You should:

- a. Reassure her that it is benign
- b. Order/Perform an US**
- c. Order a mammogram
- d. Perform an FNA
- e. Refer to surgery for excisional biopsy



The most likely diagnosis is:

- a. Breast cancer
- b. Cyst
- c. Fibroadenoma
- d. Normal breast tissue

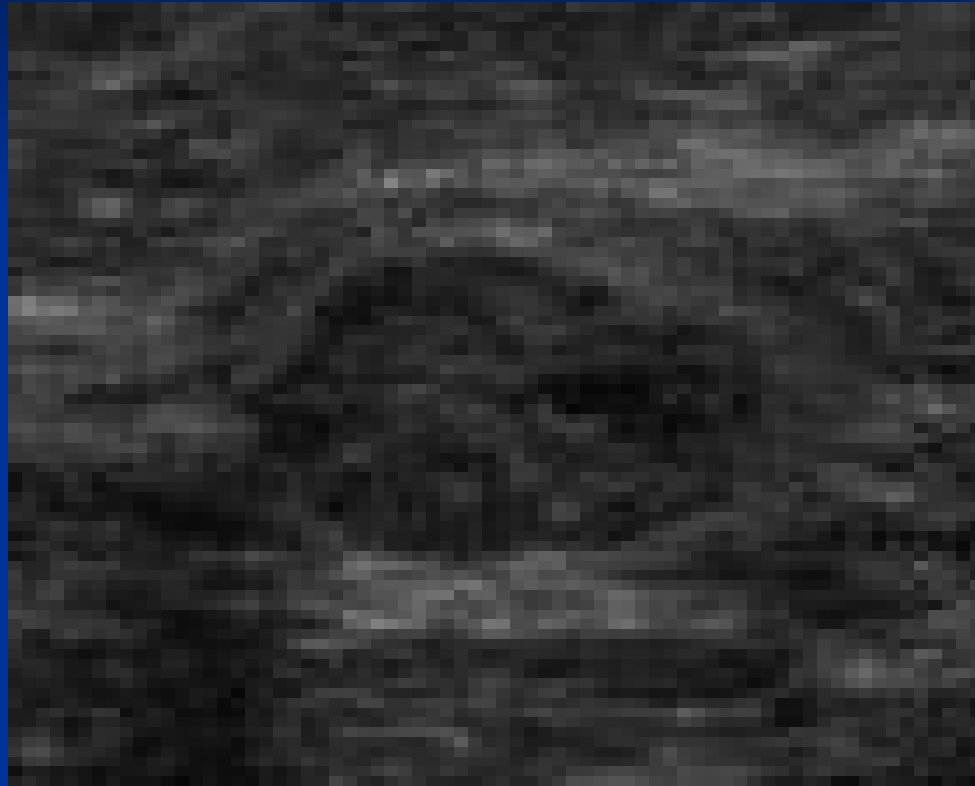
The most likely diagnosis is:

- a. Breast cancer
- b. Cyst
- c. Fibroadenoma
- d. Normal breast tissue

# Fibroadenoma

- Who warrants excision?
  - Lesion  $> 2$  cm
  - Lesion increasing significantly in size during observation period
  - Patient preference

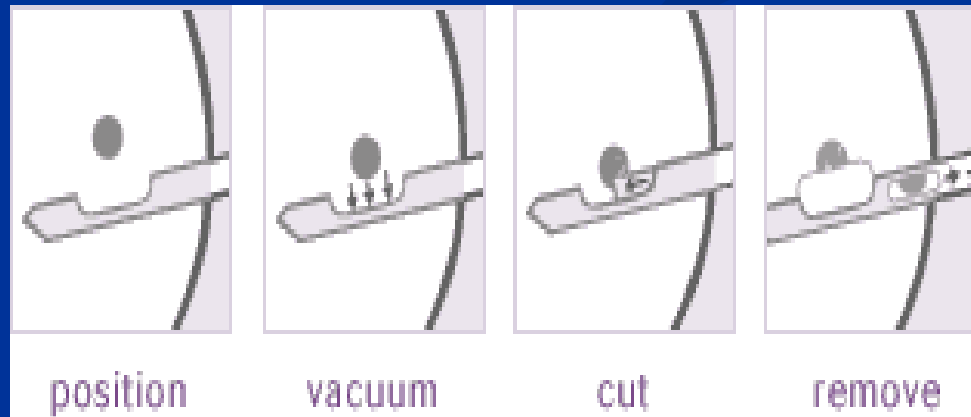
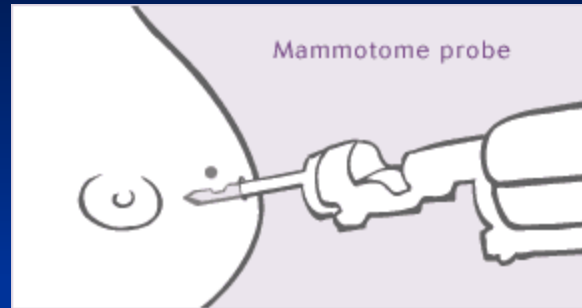
# US - Fibroadenoma



# Mammotome



# Mammotome



# Mammotome



A 57 yo female presents with a mass present in her left upper outer breast for 6 weeks. The most likely diagnosis is:

- a. Breast cancer
- b. Cyst
- c. Fibroadenoma
- d. Normal breast tissue

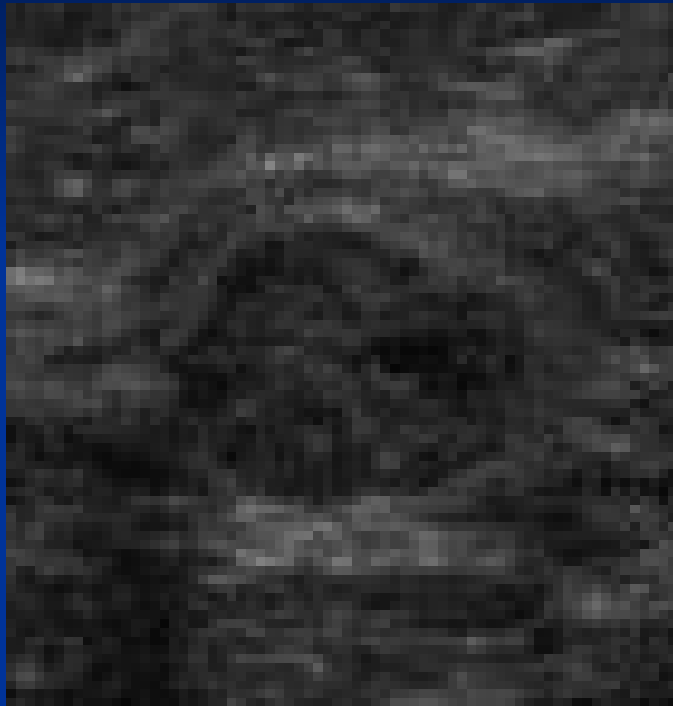


A 57 yo female presents with a mass present in her left upper outer breast for 6 weeks. The most likely diagnosis is:

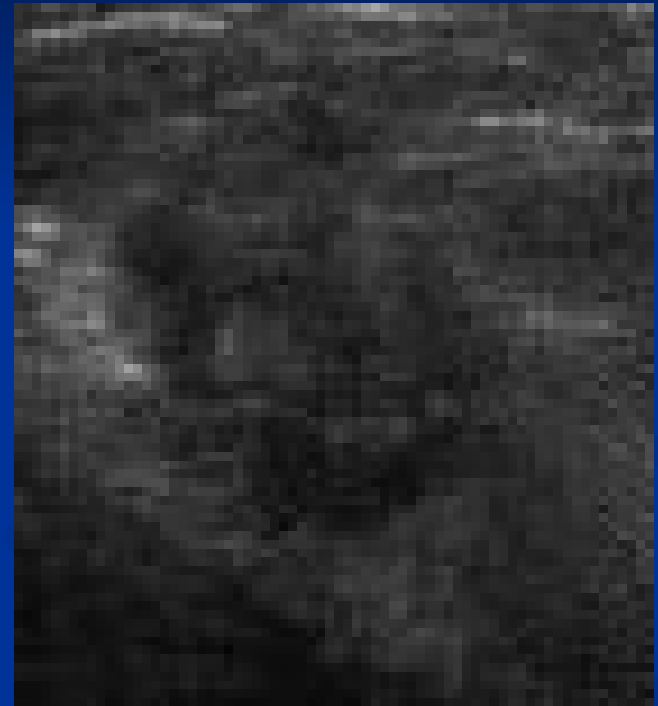
- a. Breast cancer
- b. Cyst
- c. Fibroadenoma
- d. Normal breast tissue

# US-Infiltrating Ductal CA

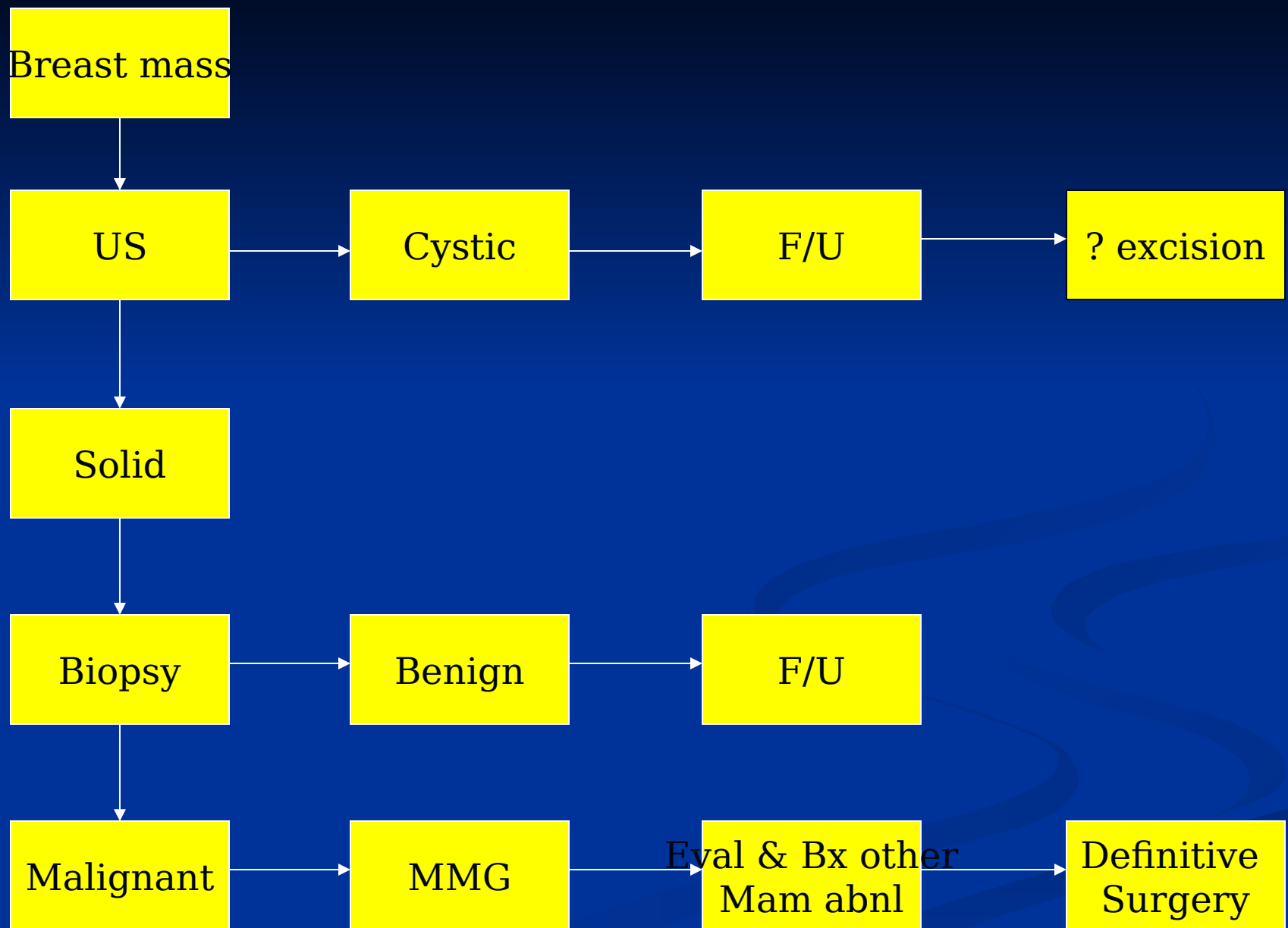




Fibroadenoma



Carcinoma



# Evaluation of a Breast Mass

- When to refer to surgery
  - As soon as you identify a patient with a mass that you do not believe is normal, dense breast tissue
- What studies to order prior to sending to surgeon
  - Premenopausal – US
  - Postmenopausal – none
  - Do not delay referral to obtain studies!

# Summary

- Differential diagnosis is dictated by patient's age  
BREAST MASS IN A  
POSTMENOPAUSAL PATIENT IS A  
CANCER UNTIL PROVEN OTHERWISE
- Cyst? Solid?
  - US
  - Aspiration

# Summary

- Biopsy
  - FNA
  - Core
  - Excisional
- Surgical Referral
  - Sooner rather than later
  - Talk to your surgeon!

# Questions?